

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/693,532
Filing Date	2003-10-23
First Named Inventor	WALTON; J. Rodney,
Art Unit	2467
Examiner Name	SaBa Tsegaye

Sheet	1	of	6	Attorney Docket No: 020573
-------	---	----	---	----------------------------

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ³	Document Number Number-Kind Code ^{2(f)} (known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/ST/	001	US5506861	04-09-1996	BOTTOMLEY; Gregory E.	
	002	US5818813	10-06-1998	SAITO; Masafumi, et al.	
	003	US5959965	09-28-1999	OHKUBO; Tadatoshi, et al.	
	004	US5973638	10-26-1999	ROBBINS; David F., et al.	
	005	US6097771	08-01-2000	FOSCHINI; Gerard Joseph	
	006	US6115354	09-05-2000	WECK; Christfried	
	007	US6141542	10-31-2000	KOTZIN; Michael D., et al.	
	008	US6314113	11-06-2001	GUEMAS; Philippe	
	009	US6317612	11-13-2001	FARSAKH; Christof	
	010	US6330293	12-11-2001	KLANK; Otto, et al.	
	011	US6333953	12-25-2001	BOTTOMLEY; Gregory E., et al.	
	012	US6345036	02-05-2002	SUDO; Hiroaki, et al.	
	013	US6492942	12-10-2002	KEZYS; Vytas	
	014	US6545997	04-08-2003	BOHNKE; Ralf, et al.	
	015	US6597682	07-22-2003	KARI; Hannu	
	016	US6728233	04-27-2004	PARK; Jin-Soo, et al.	
	017	US6785513	08-31-2004	SIVAPRAKASAM; Srinivas	
	018	US6920194	07-19-2005	STOPLER; Danny, et al.	
	019	US6940917	09-06-2005	MENON; Murali Paravath, et al.	
	020	US6990059	01-24-2006	ANIKHINDI; Santosh, et al.	
	021	US6992972	01-31-2006	VAN NEE; Richard	
	022	US7006483	02-28-2006	NELSON; Jr. George Rodney, et al.	
	023	US7009931	03-07-2006	MA; Jianglei, et al.	
	024	US7068628	06-27-2006	LI; Ye, et al.	
	025	US7492737	02-17-2009	FONG; Mo-Han, et al.	
/ST/	026	US7623871	11-24-2009	SHEYNBLAT; Leonid	

EXAMINER SIGNATURE /Saba Tsegaye/ (02/01/2011)

DATE CONSIDERED

Substitute for form 1449/P10

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/693,532
Filing Date	2003-10-23
First Named Inventor	WALTON; J. Rodney,
Art Unit	2467
Examiner Name	SaBa Tsegaye

Sheet	2	of	6	Attorney Docket No: 020573
-------	---	----	---	----------------------------

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/ST/	027	US20010046205	11-29-2001	EASTON; Kenneth D., et al.	
	028	US20020003774	01-10-2002	WANG; Zhaocheng, et al.	
	029	US20020064214	05-30-2002	HATTORI; Toshihiro, et al.	
	030	US20020184453	12-05-2002	HUGHES; Suzanne M., et al.	
	031	US20020191535	12-19-2002	SUGIYAMA; Takatoshi, et al.	
	032	US20030012308	01-16-2003	SAMPATH; Hemanth T., et al.	
	033	US20030128656	07-10-2003	SCARPA; Carl	
	034	US20040071104	04-15-2004	BOESEL; Robert W., et al.	
	035	US20040136349	07-15-2004	WALTON; J. Rodney, et al.	
	036	US20040160987	08-19-2004	SUDO; Hiroaki, et al.	
	037	US20050120097	06-02-2005	WALTON; J. Rodney, et al.	
/ST/	038	US20080285670	11-20-2008	WALTON; J. Rodney, et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ Number ⁴ Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
/ST/	039	AU2002259221	11-25-2002	QUALCOMM INC.		<input type="checkbox"/>
/ST/	040	CN1086061	04-27-1994	ERICSSON GE MOBILE COMMUNICAT.		<input checked="" type="checkbox"/>
/ST/	041	CN1489836A	04-14-2004	MATSUSHITA ELECTRIC IND. CO., LTD.		<input checked="" type="checkbox"/>
/ST/	042	EP0762701A2	03-12-1997	ADVANCED DIGITAL TELEVISION BR [JP]		<input type="checkbox"/>
/ST/	043	EP0772329	05-07-1997	DIGI-MEDIA VISION		<input type="checkbox"/>

EXAMINER SIGNATURE /Saba Tsegaye/ (02/01/2011)

DATE CONSIDERED

Substitute for form 1449/P10

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/693,532
Filing Date	2003-10-23
First Named Inventor	WALTON; J. Rodney,
Art Unit	2467
Examiner Name	SaBa Tsegaye

Sheet	3	of	6	Attorney Docket No: 020573
-------	---	----	---	----------------------------

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T 6
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
				LIMITED.		
/ST/	044	EP0895387A1	02-03-1999	THOMSON BRANDT GMBH [DE]		<input checked="" type="checkbox"/>
	045	EP0929172A1	07-14-1999	LUCENT TECHNOLOGIES INC [US]		<input type="checkbox"/>
	046	EP1061446	12-20-2000	SUN MICROSYSTEMS, INC.		<input type="checkbox"/>
	047	EP1185015	03-06-2002	ALCATEL (FR)		<input type="checkbox"/>
	048	EP1265411	12-11-2002	SONY DEUTSCHLAND GMBH.		<input type="checkbox"/>
	049	EP1315311A1	05-28-2003	FUJITSU LTD [JP]		<input type="checkbox"/>
	050	EP1379020	01-07-2004	NATIONAL UNIVERSITY OF SINGAPORE.		<input type="checkbox"/>
	051	EP1387545A2	02-04-2004	SAMSUNG ELECTRONICS CO., LTD.		<input type="checkbox"/>
	052	EP1556984A2	07-27-2005	QUALCOMM INC [US]		<input type="checkbox"/>
	053	GB2373973A	10-02-2002	TOSHIBA RESEARCH EUROPE LIMITED.		<input type="checkbox"/>
	054	JP03104430	05-01-1991	NIPPON TELEGRAPH & TELEPHONE CORP.		<input checked="" type="checkbox"/>
	055	JP09327073	12-16-1997	N T T IDO TSUSHINMO KK.		<input checked="" type="checkbox"/>
	056	JP1028077	01-27-1998	SATO TAKURO WATANABE SOICHI ABE TAKEO.		<input checked="" type="checkbox"/>
	057	JP10327126	12-08-1998	LUCENT TECHNOLOGIES, INC.		<input checked="" type="checkbox"/>
	058	JP11205273	07-30-1999	TOSHIBA CORP.		<input checked="" type="checkbox"/>
	059	JP11252037A	09-17-1999	LUCENT TECHNOLOGIES INC.		<input checked="" type="checkbox"/>
	060	JP2000092009A	03-31-2000	SONY CORP.		<input checked="" type="checkbox"/>
	061	JP2001231074	08-24-2001	NORTEL NETWORKS LTD.		<input checked="" type="checkbox"/>
	062	JP200186045	03-30-2001	LUCENT TECHNOLOGIES, INC.		<input checked="" type="checkbox"/>
/ST/	063	JP2002111627	04-12-2002	SONY INTERNATL		<input checked="" type="checkbox"/>

EXAMINER SIGNATURE

/Saba Tsegaye/ (02/01/2011)

DATE CONSIDERED

Substitute for form 1449/P10

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Complete if Known

Application Number	10/693,532
Filing Date	2003-10-23
First Named Inventor	WALTON; J. Rodney,
Art Unit	2467
Examiner Name	SaBa Tsegaye

Sheet	4	of	6	Attorney Docket No: 020573
-------	---	----	---	----------------------------

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T 6
		Country Code ³ Number ⁴ Kind Code ⁵ (if known)				
				EUROP GMBH.		
/ST/	064	JP2002164814	06-07-2002	NIPPON SOKEN INC., et al.		<input checked="" type="checkbox"/>
	065	JP2002204217	07-19-2002	NTT DOCOMO INC.		<input checked="" type="checkbox"/>
	066	JP200264879	02-28-2002	SK TELECOM CO LTD.		<input checked="" type="checkbox"/>
	067	JP200277098	03-15-2002	MITSUBISHI ELECTRIC CORP.		<input checked="" type="checkbox"/>
	068	JP200277104	03-15-2002	MITSUBISHI ELECTRIC CORP.		<input checked="" type="checkbox"/>
	069	JP2003504941	02-04-2003	SAMSUNG ELECTRONICS CO LTD.		<input checked="" type="checkbox"/>
	070	JP9266466A	10-07-1997	SUMITOMO ELECTRIC IND LTD.		<input checked="" type="checkbox"/>
	071	JP9512156T	12-02-1997	KONLE TILMAR [DE]		<input checked="" type="checkbox"/>
	072	KR1020020003370	01-12-2002	NTT DOCOMO, INC.		<input checked="" type="checkbox"/>
	073	RU2141168C1	11-10-1999	MOTOROLA LTD.		<input type="checkbox"/>
	074	RU2168278	05-27-2001	KORPORATSIJA SAMSUNG EHLEKTRON.		<input checked="" type="checkbox"/>
	075	WO00062456	10-19-2000	SAMSUNG ELECTRONICS CO. LTD., KR.		<input type="checkbox"/>
	076	WO0126269A1	04-12-2001	SAMSUNG ELECTRONICS CO LTD [KR]		<input type="checkbox"/>
	077	WO02065664A2	08-22-2002	QUALCOMM INC [US]		<input type="checkbox"/>
	078	WO02082689A2	10-17-2002	MOTOROLA INC [US]		<input type="checkbox"/>
	079	WO02099992A1	12-12-2002	QUALCOMM INC [US]		<input type="checkbox"/>
	080	WO03028153A1	04-03-2003	ARRAYCOMM INC [US]		<input type="checkbox"/>
	081	WO03047140A1	06-05-2003	FUJITSU LIMITED.		<input type="checkbox"/>
	082	WO04002011	12-31-2003	QUALCOMM INC [US]		<input type="checkbox"/>
	083	WO04002047	12-31-2003	QUALCOMM INC [US]		<input type="checkbox"/>
/ST/	084	WO199809395	03-05-1998	THE BOARD OF TRUSTEES OF THE		<input type="checkbox"/>

EXAMINER SIGNATURE /Saba Tsegaye/ (02/01/2011)

DATE CONSIDERED

Substitute for form 1449/PTO INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>		<i>Complete if Known</i>		
		Application Number	10/693,532	
		Filing Date	2003-10-23	
		First Named Inventor	WALTON; J. Rodney,	
		Art Unit	2467	
		Examiner Name	SaBa Tsegaye	
Sheet	5	of	6	Attorney Docket No: 020573

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ₆
		Country Code ³ -Number ⁴ Kind Code ⁵ (if known)				
				LELAND STANFORD JUNIOR UNIVERSITY, US.		
/ST/	085	WO96035268	11-07-1996	QUALCOMM INCORPORATED.		<input type="checkbox"/>
/ST/	086	WO9824192A1	06-04-1998	TRW INC [US]		<input type="checkbox"/>
/ST/	087	WO9826523	06-18-1998	ERICSSON INC.		<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>
						<input type="checkbox"/>

NON PATENT LITERATURE DOCUMENTS					T2
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			
/ST/	088	DIGGAVI, S. et al., "Intercarrier interference in MIMO OFDM," IEEE International Conference on Communications, 2002, Vol. 1, 485-489.			<input type="checkbox"/>
/ST/	089	European Search Report - EP09171254, Search Authority -The Hague Patent Office, 09-03-2010 (020573).			<input type="checkbox"/>
	088	International Search Report - PCT/US2003/34517, International Search Authority, European Patent Office, 2004-04-27 (020573).			<input type="checkbox"/>
/ST/	091	ISERTE et al., "Joint beamforming strategies in OFDM-MIMO systems," 2002, sections 2 and 3, Department of Signal Theory and Communications.			<input type="checkbox"/>
/ST/	092	Jaehak Chung et al: "Multiple antenna systems for 802.16 systems." IEEE 802.16 Broadband Wireless Access Working Group < http://ieee802.org/16 > , IEEE 802.16abc-01/31, 2001-09-07.			<input type="checkbox"/>
/ST/	093	LEBRUN G., et al., "MIMO transmission over a time varying TDD channel using SVD," Electronics Letters, 2001, Vol. 37, 1363-1364.			<input type="checkbox"/>
/ST/	094	LI et al., "Simplified Channel Estimation for OFDM Systems with Multiple Transmit Antennas," IEEE Transactions on Wireless Communications, January 2002, Vol. 1, No. 1, 67-75.			<input type="checkbox"/>
/ST/	095	SAMPATH H., et al., "Joint transmit and receive optimization for high data rate wireless communication using multiple antennas, XP010373976," 2002, 215-219.			<input type="checkbox"/>
/ST/	096	WONG K. K., et al., "Optimizing time and space MIMO antenna system for frequency selective fading channels," 2001, Sections II and III and V, 1396.			<input type="checkbox"/>
					<input type="checkbox"/>

EXAMINER SIGNATURE /Saba Tsegaye/ (02/01/2011)

DATE CONSIDERED